

## ASSESS YOUR GARDEN'S MICROCLIMATE - CHECKLIST

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1. **Sun and shade:** When do the various sections of the garden receive the sun – in the morning or afternoon, all day, dappled or partial shade/sun, and for how many hours? Many full sun species and grassland species need at least 6 hours of sun a day.
2. **Are these areas dry or moist?** It may be a dry shade under a tree with thirsty roots or a thick canopy. A full sun area around a garden tap will be moist. Sloping ground in hot sun will be dry.
3. **Position and size of trees:** Large evergreen trees on the east side of the house block out the morning sun which in summer may not be an issue, but you may want this sun in winter. Beds under these trees will receive morning sun but may get the late afternoon sun. Evergreen trees on the west side will create beds with morning sun but afternoon shade, and it will be cooler in winter. Do neighbours trees and buildings cast shade or channel wind? How do your trees affect nearby beds?
4. **Depth of shade:** Thick evergreen trees cast a darker shade and light, or sparse canopied trees have brighter shade conditions. Deciduous trees allow in the winter sun which can be quite harsh. Even many evergreen trees shed a lot of leaves, allowing a lot more sun in during winter. Buildings cast a denser shade than most trees.
5. **Light conditions:** Is there any reflected light off light coloured walls, paving and water surfaces? Bright light levels can be a problem for some plants, increasing the amount of heat they have to cope with. Reflected light can improve conditions in shade increasing the number of plants that will grow here. Trees with high canopies let in more light than those with low canopies.
6. **Overhead foliage or obstacles:** Foliage can block a significant amount of rainfall as can over-hanging eaves or other structures. These create drier microclimates under them.
7. **Watch your garden through the changing seasons:** Sun and shade boundary lines will change from summer to winter. In winter the elevation of the sun is lower in the sky, the sun may not shine over the tree canopies until much later in the morning, and the suns' low elevation allows it to reach further into shady areas in winter.

8. **How much hard landscaping do you have?** Heat radiates off paving and walls warming the area around them. In a hot climate, plants will need to cope with this extra heat, but it can be used to the advantage of plants in cold areas. Dark coloured wall absorb and give off more heat than light coloured walls. Tar and gravel can get very hot, increasing the temperature and water evaporation of the area close by. List your conditions.
9. **Water features:** streams, ponds and other water features will cool and moisten the surrounding air. Could you add one to a hot patio? What species currently grow around these features?
10. **What areas are exposed to summer and winter winds and what areas are protected?** What is your prevailing wind? Is it hot or cold? Can these protected areas get too hot in summer without a cooling breeze blowing through?
11. **Do you have sloping ground and by how much does it slope?** Is the top of the slope exposed? Where do the sun and shade fall? In winter, in particular, you will notice the cooling air as you walk down the slope.
12. **Does runoff drain into or away from your beds?** Do you lose this valuable water source down the stormwater drain? Can you amend slopes to drain into beds or onto lawn?
13. **Are certain plants water hogs?** Do they have shallow or deep root systems? How much will they compete with new plants for water? They could create drier conditions for other plants to cope with. Do you allow weeds to grow that compete for resources?
14. **Aspect:** Note the aspect of your beds; north facing areas are usually hotter than south facing, for example.
15. **Soil type** – dry, sandy soils don't retain water for long. Clay soils can retain it for too long causing root rot in plants requiring dry conditions. What type do you have?
16. **Maintenance:** do you keep your soils well mulched to retain moisture and keep soil temperatures even?